Amendments to the Claims

1. (*Original*) A semiconductor device comprising:

a semiconductor substrate of first conductivity type having opposed first and second major surfaces;

a semiconductor component defined adjacent to the first major surface;

a trench extending from the first major surface into the semiconductor substrate, having an inner side facing the semiconductor component and an outer side opposed to the semiconductor component;

a thermal oxide filling the trench; and

a channel stop diffusion of first conductivity type extending from the first major surface on the outer side of the trench and further extending under the trench from the outer side to the inner side of the trench.

2. (*Original*) A semiconductor device according to claim 1 further comprising a well of a second conductivity type opposite to the first conductivity type implanted into the first major surface of the semiconductor substrate; wherein the trench extends from the first major surface through the well into the substrate.

3. (*Original*) A semiconductor device according to claim 2 wherein the semiconductor component is a first transistor, the semiconductor device further comprising:

a second transistor adjacent to the first transistor;

a second trench around the second transistor extending from the first major surface into the semiconductor substrate, having an inner side facing the second transistor and an outer side opposed to the second transistor; and

a thermal oxide filling the second trench;

wherein the channel stop diffusion extends from the first major surface between the first and second trenches under each of the first and second trenches.

4. (*Currently Amended*) A semiconductor device ~~according to any preceding claim~~ according to claim 1, wherein the semiconductor component is an insulated gate field

effect transistor having longitudinally spaced source and drain implants in the well defining a channel region at the first major surface between the source and drain implants.

5. (*Original*) A semiconductor device according to claim 4 comprising a gate oxide over the channel region of the first major surface and a gate over the gate oxide, wherein the gate oxide and gate span the channel region from the trench on one side of the channel region to the trench on the other side of the channel region so that the channel region extends laterally between the trenches.

6. (*Original*) A method of manufacturing a semiconductor device including:

providing a substrate of a first conductivity type extending between first and second major surfaces;

forming a trench around a component region, the trench extending from the first major surface past the component region into the substrate;

forming thermal oxide filling the trench;

implanting a dopant of the second conductivity type along the trench and offset outwards from the centre of the trench away from the component region; and

diffusing the dopant so that it extends underneath the trench.

7. (*Original*) A method according to claim 6 further comprising the step of implanting a well of a second conductivity type opposite to the first conductivity type at the first major surface;

wherein the component region is formed in the well and the trench extends from the first major surface through the well to the substrate.

8. (*Currently Amended*) A method ~~according to claim 6 or 7~~ <u>according to claim 6</u> wherein the step of implanting a dopant of second conductivity type is carried out by forming a mask having an opening above the trench, the opening being offset away from the component region, and then implanting the channel stop dopant through the mask.

9. (*Currently Amended*) A method ~~according to claim 6, 7 or 8~~ according to claim 6, wherein the mask is patterned to form the opening using a reduction stepper.

10. (*Currently Amended*) A method ~~according to any of claims 6 to 9~~ according to claim 6, further comprising the steps of:

forming longitudinally spaced source and drain diffusions defining a channel region therebetween in the component region;

depositing a gate oxide layer at least over the channel region;

depositing a gate over the gate oxide layer, the gate extending laterally across the channel region, having the trench at each end of the gate.

11. (*Cancelled*)

12. (*Cancelled*)